

## AYKAMTELI HIGHER-LEVEL PHONOLOGY

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0. This paper describes phonological features of units above the level of the syllable in narrative Aykamteli.<sup>1</sup> Because of the circumstances under which the field work for the paper was done,<sup>2</sup> it was not possible to collect data which would have enabled me fully to treat phonological features related to questions or command forms.

One point of interest is the relationship of intonation to grammatical constituents: distribution of variants of an intonation contour depends on the grammatical construction over which the contour occurs. This point is discussed in section 3.2.

1. Syllables are grouped together in feet. Each foot contains one nuclear syllable, which is stressed; and it may contain one or two other syllables, either preceding or following or both, which are not stressed. In two- or three-syllable feet, any of the syllables may act as nucleus (a vertical tick ' precedes the stressed syllable). 'tỳlỳ cut leaves, ~ma'hi very, 'ulifi forest, ma'tofi possessions, tona'tox with Donaldo.

The position of foot boundaries is sometimes difficult to determine. However, the following are features of such boundaries: (1) When two vowels are contiguous across a foot boundary, a lenis glottal stop helps mark the juncture (juncture is indicated by +). 'ya+'ofi I am hungry. (2) When two consonants are contiguous across a foot boundary, there are two types of junctures. (Except for /w/ and /y/, all syllable-final consonants are at foot boundary. /w/ and /y/ occur syllable-final both at foot boundary and within the foot). (a) When two like consonants are contiguous across a foot boundary, the juncture between them is associated with a delayed release of the consonant, giving a phonetically long consonant. 'yamak+'ku+la'yu we shall be there. (b) When two unlike consonants are contiguous across a foot boundary, the juncture between them includes the delayed release of the final consonant and a slight open transition. 'ya yas+'henàp+tỳ'lỳ I cut house

leaves. (3) When a consonant is followed by a vowel across a foot boundary, the juncture includes delayed release of the syllable-final consonant, a slight open transition and an optional lenis glottal stop preceding the vowel. 'yamak+ 'a ~ko+la'yom we went again. (4) When a vowel is followed by a consonant across a foot boundary, the juncture is barely perceptible. Morphophonemically, the foot boundary usually coincides with a morpheme boundary.<sup>3</sup> 'xama+'tali+pà 'hà at the Shamatali village.

2. There are four intonation contours: rising, falling-rising, mid-rising and incomplete, each occurring over one or more feet.

The rising contour occurs over one, two or three feet. It begins on a low pitch, rises to high on the penultimate or final syllable of the last foot and falls off rapidly to a mid pitch. xamatalipà hãm to the Shamatalis;  
tonaton Donaldo (as actor).

The falling-rising contour begins on a mid or high pitch, falls to low, then rises to high on the penultimate or final syllable of the last foot and falls off rapidly to a mid pitch. ahỳ hapoka a kuãm you have no pots for cooking.

The mid-rising contour begins on a mid pitch, rises to high on the penultimate or final syllable of the last foot and falls off rapidly to a mid pitch. paluhuli a ku the Palahuli people said.

The incomplete contour begins as rising, falling-rising or mid-rising but is terminated before it reaches the highest point (/ symbolizes a pause). afiãm/ afiãm ya tay hã when I saw the plane.

Most intonation contours are accompanied by a crescendo (increasing loudness) across the entire contour to the final foot stress. Except in the case of the incomplete contour, the crescendo is followed by a slight decrescendo (decreasing loudness). The loudest point of the crescendo coincides with the highest point of the intonation contour, and with the stress of the

final foot in the contour. As loudness increases, the foot stresses become progressively louder (crescendo and decrescendo are symbolized by the musical notations  $\langle$  and  $\rangle$ ). yamak fuimaÿ tãhã when we came;  
yak waÿ peximaim I don't want to eat it.

A sharp crescendo sometimes occurs as a stylistic alternative. When it does, the progressive loudness of syllables occasionally brings an unstressed syllable to a level of loudness perceptually equal to that of the foot stress, as in 'ya yas 'henãp 'tÿ'ly 'tãhã when I cut house leaves, where the stress on the second syllable of tÿly cut leaves is perceptually the same as the stress on the first syllable.<sup>4</sup>

Another stylistic alternative is a decrescendo across the entire intonation contour. As loudness decreases, the foot stresses become progressively softer. a ku-kupàn/ palahuli a ku-kupàn they said, the Palahuli people said.

Any intonation contour not ending in a stop optionally ends in a glottal stop more fortis than the glottal stop which helps mark foot boundaries (it is symbolized ?). xamatalipã hãm?/ yã fu-kupele? I went to the Shamatalis. Each intonation contour is optionally followed by pause. When pause follows rising, falling-rising or mid-rising contours it may include a breath.

Although there are not sufficient tape recorded data to analyze the phonological features of questions and command forms, remembered conversations and a few examples in the tapes indicate that both these types of utterance carry different intonation contours from those of narrative speech. The question contour is probably a level-rising contour beginning on a mid pitch and skipping to an extra high on the penultimate or final syllable of the last foot, then falling off. a ke-layom did she fall? The command form, as I recall, is mid on the first syllable and high on all other syllables.

~ika plalon ~mai don't laugh.

3.0. Morphophonemically, foot stress is part of the representation of certain morphemes, and the distribution of variants of intonation contours is predictable in terms of the grammatical sequences they occur with.

3.1. In ordinary speech, foot stress always occurs on verb aspect markers 'kàn immediate in time, ku'pàn near in time, ku'pele distant in time, 'kule remote in time, and 'wi completed; on verb suffixes '-o continuing action and '-wi nominalizer;<sup>5</sup> on verb classifiers '-ki, 'li, 'pi; on noun suffixes '-ÿx '-ÿxo, '-ax '-axo, accompaniment, '-ÿn '-an referent marker, and '-mu verbalizer; and on the first syllable of all stems. (The noun suffix -pà plural is optionally stressed; and the noun suffixes -x accompaniment and -n referent marker may draw the foot stress of the stem on which they occur to the final syllable). However, each stem of more than two syllables has potential stress points on the first syllable and on each alternate syllable counting from the penult toward the beginning of the stem<sup>6</sup>

In emphatic speech, foot stress shifts from the first to the second potentially stressed syllable on stems of more than two syllables: with nouns, 'matofi 'ya 'pexi'maÿ I desire possessions vs. ma'tofi 'ya 'ifi'poi'mam I carried the possessions (the emphasis in the second utterance is on the fact that possessions were carried rather than some other item); with adjectives, 'a 'totihi pla'lem they fixed it (made it good) vs. 'a to'tihi pla-'lem they certainly fixed it. Stress shifts from the first to the second syllable of two-syllable stems: with verbs, 'ya yas 'henàp 'tÿlÿ I cut house leaves vs. 'ya yas 'henàp tÿ'lÿ I certainly cut house leaves; with adverbs, 'ya 'ofi '~mahi I am very hungry vs. 'ya 'ofi ~ma'hi I am extremely hungry; with adjectives 'a 'hute it is heavy vs. 'a hu'te it is very heavy.

3.2. Intonation contours coincide with syntactic sequences. With the exception of the demonstrative clause, each Aykamteli clause contains one clause core — an obligatory predicate, together with an optional subject and pronoun referent; it may also contain one or more optional margin constituents. Dependent clause cores contain an obligatory time or location marker as part of the predicate.<sup>7</sup>

Clause cores whose predicate consists of more than one phonological foot carry the falling-rising contour, with the low point on the first syllable of the predicate construction. In the following sequence, the predicate contains both the verb stem tÿlÿ cut leaves and the aspect marker kupele distant in time: ya yas henàp tÿlÿ-kupele I cut house leaves long ago. In the sequence kafy lihà ya amimu I will call you "big sister", the predicate contains both the noun stem ami big sister and -mu verbalizer. In

yalo ya nia pla- li tàhà when I shot game, the predicate contains the verb stem nia shoot, the auxiliary verb pla, the verb classifier li and the time marker tàhà when. In xama a totihi tapir is good, the predicate is the emphasized adjective stem totihi good.

The mid-rising contour is morphophonemically a sub-type of the falling-rising contour. It occurs on clause cores whose predicate is a single phonological foot stressed on the first syllable. palahuli a ku the Palahulis said; the predicate is the verb stem ku say.

Constituents which do not contain a predicate, that is, margin constituents and the demonstrative clause, take the rising contour. Margin constituents include accompaniment, xamatalix/ ~komilix/ yalo yama wama with the Shamatalis, with everyone, we ate meat; manner, opsayn/ ya fuimaÿ tàhà slowly, when I came, noun referent, xeawàn/ ya xòmÿlÿ hÿÿ-layu-kàn John (acting) sent me; time, ya fuimam/ fenatàhà I came in the morning; and location, hutukano hà ya ku-kem in the field I stayed. The demonstrative clause consists of a noun and a demonstrative particle. yano a (it is a) house.

4. This text illustrates the simultaneous occurrence of the phonological features described in this paper.

1. 'pala+'fuli + a 'fu + '~ko/ yu'tuhà? / yu'tuhà/ a 'fu + '~ko?
2. 'pala+'huli + 'a? / yu'tuhà/ 'ya? + 'ya + 'fu + 'ko? + a 'ku+ku'pàn/
3. a 'ku+ku'pàn/ a pla'han + '~waloho + 'yalo/ a'fu+'im?

1. The Palahulis will return; after a long time, after a long time they will return. 2. The Palahulis. After a long time I...I will return, they said.

3. They said. It is very, very far. They won't come.

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NOTES

1. Aykamteli is a Shiriana (Waica) dialect of northern Brazil. The Shiriana are briefly described in Steward, Julian H., ed., Vol. 3, BAE-B 143, 1948, pp. 861-864. Aykamteli is not mentioned in this or any other reference source available to me, but it is definitely mutually intelligible with Waica. The dialect is spoken by about 300 to 500 people living on or near the headwaters of the Parima River, Território Federal de Roraima, Brazil.

In a paper written at the workshop session of the Summer Institute of Linguistics at the University of Oklahoma in 1961, Frances Tracy has described the phonemes of Palimiteli, a related dialect. These are stops p t k, fricatives h s x [ʃ], flap l, nasals m n, semi-vowels w y, vowels i e ÿ [ɨ] à [ʌ] a u o, and ~ nasalization. The grave accent over vowels indicates vowel quality only. ~ indicates the onset of nasalization, which continues until the next juncture. Aykamteli phonemes are identical, with the addition of f, the voiceless labial fricative, varying in point of articulation from bilabial to labiodental. The reader may be interested in comparing the intonation and stress systems of Aykamteli with those of Shiriana, a related dialect, as described by Ernest Migliazza and Joseph E. Grimes, *Shiriana Phonology*, AL 3:6.31-41 (1961)

2. Though I have lived among Waica speakers for over three years, the data for this particular paper were gathered in a series of four four- to seven-day trips to an Aykamteli village between August and December, 1962, under the auspices of the Unevangelized Fields Mission. (Aykamteli is closely related to other Waica dialects which I speak, and I lived in the dialect area for six months.) They consist of tape recorded narratives concerning the day-by-day activities of the tribe. There are a few questions and command forms interspersed between the narratives, but not enough to permit thorough analysis.

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3. However, not all morpheme boundaries are foot boundaries. In the example cited, 'xama+'tali+pà'hà, there is a morpheme boundary between 'pà plural and hà location marker. Ordinarily, the location marker hà is a foot in itself. But when it occurs following the noun suffix -pà plural, it becomes the nucleus of a two-syllable foot. When emphasis is on the place rather than the fact of location, stress moves from hà to -pà. The only other instance in which hà has been observed to become the nucleus of a two-syllable foot is when it follows the Portuguese loan word surucucu bush-master (used as a place name). The stress of this Portuguese word is on

the final syllable, and the Aykamteli alternate 'sulukuku+'hà at Surucucu with 'suluku+'ku hà at Surucucu.

4. On the other hand, this phenomenon may be attributable to the shift in stress for emphasis described in 3.1.

5. -wi nominalizer permits a verb stem to fill the subject or referent slot in the clause; wi aspect marker occurs as part of the predicate.

6. Stress was checked by putting words through frames. A frame for nouns is --ya taŷ I see a ---. A frame for verbs is ya -- kupàn I --- re-  
cently. When this checking was done, we found that each grammatical noun, adjective, adverb or verb stem has one foot stress on the first syllable, and one secondary stress on each alternate syllable counting backwards from the penult (secondary stress is symbolized ,): nouns, 'yano house, 'u,lifi forest; adjectives, 'uxi black, 'to,tihi good; adverbs, 'mahì very; verbs, 'heli hear, 'mõ,hulu become lost. Compound words, since they are made up of more than one stem or of one or more stems and a suffix which carries stress, consist of more than one foot, as 'tulu+'ma+'wi pencil, which is made up of tulu design, ma to cause and -wi nominalizer.

There are very few grammatical words of more than three syllables that are not formed either by compounding or suffixation. The only two examples which come to mind are xamatali Shamatali tribe and palahuli Palahuli tribe. At least for xamatali a fair case can be made for the notion that it is formed of xama tapir plus either tha to shoot or ta to see and li verb classifier. However, in this case it ought to carry three stresses; actually it is stressed on the first and third syllables only, as is palahuli. In any case, phonologically both these words have two foot stresses.

7. For a full description of clauses see Borgman, Donald M. and Sandra L. Cue, *Sentence and Clause Types in Central Waica (Shiriana)*, IJAL 29.222-229 (1963).